Arizona State Science Standards (Grades 4-8 and High School)
satisfied by the Desert Tortoise Tracking Program.

Grade 5
Strand 1

Concept 1: Observations, Questions, and Hypotheses
Formulate predictions, questions, or hypotheses based on observations. Locate appropriate resources.

PO 1. Formulate a relevant question through observations that can be tested by an investigation.
(See M05-S2C1-01)

PO 2. Formulate predictions in the realm of science based on observed cause and effect relationships.

Concept 2: Scientific Testing (Investigating and Modeling)
Design and conduct controlled investigations.

PO 1. Demonstrate safe behavior and appropriate procedures (e.g., use and care of technology, materials, organisms) in all science inquiry.

PO 2. Plan a simple investigation that identifies the variables to be controlled.

PO 3. Conduct simple investigations (e.g., related to forces and motion, Earth processes) based on student-developed questions in life, physical, and Earth and space sciences.

PO 4. Measure using appropriate tools (e.g., ruler, scale, balance) and units of measure (i.e., metric, U.S. customary).
(See M05-S4C4-01)

PO 5. Record data in an organized and appropriate format (e.g., t-chart, table, list, written log).
(See W05-S3C2-01 and W05-S3C3-01)

Concept 3: Analysis and Conclusions
Analyze and interpret data to explain correlations and results; formulate new questions.

PO 1. Analyze data obtained in a scientific investigation to identify trends and form conclusions.
(See M05-S2C1-03)

PO 2. Analyze whether the data is consistent with the proposed explanation that motivated the investigation.

PO 3. Evaluate the reasonableness of the outcome of an investigation.

PO 4. Develop new investigations and predictions based on questions that arise from the findings of an investigation.

PO 5. Identify possible relationships between variables in simple investigations (e.g., time and distance; incline and mass of object).

Concept 4: Communication
Communicate results of investigations.

PO 1. Communicate verbally or in writing the results of an inquiry.
(See W05-S3C3-01)

PO 3. Communicate with other groups or individuals to compare the results of a common investigation.

Strand 2

Concept 2: Nature of Scientific Knowledge
Understand how science is a process for generating knowledge.

PO 1. Provide examples that support the premise that science is an ongoing process that changes in response to new information and discoveries (e.g., space exploration, medical advances).

PO 3. Describe how scientific knowledge is subject to modification and/or change as new information/technology challenges prevailing theories.

PO 4. Compare collaborative approaches that scientists use for investigations (e.g., teams, individual with peer review).

Strand 3

Concept 1: Changes in Environments
Describe the interactions between human populations, natural hazards, and the environment.

PO 1. Explain the impacts of natural hazards on habitats (e.g., global warming, floods, asteroid or large meteor impacts).

PO 2. Propose a solution, resource, or product that addresses a specific human, animal, or habitat need.

PO 3. Evaluate the possible strengths and weaknesses of a proposed solution to a specific problem relevant to human, animal, or habitat needs.

Concept 2: Science and Technology in Society
Develop viable solutions to a need or problem.

PO 1. Describe the relationship between science and technology.

PO 2. Explain how scientific knowledge, skills, and technological capabilities are integral to a variety of careers.

PO 3. *Design and construct a technological solution to a common problem or need using common materials.*